

HDMI/DVI to VGA/Component & Audio Break-out Converter

User Manual

(HCV-VA)



All information is subject to change without notice.
All names & trademarks are property of their respective owners.
Rev.1002

Full HD
1080

WUXGA
x1920
x1200

dvi
digital visual interface

HDMI™
HIGH-DEFINITION MULTIMEDIA INTERFACE

FC CE RoHS
Compliance

Made in Taiwan



Safety and Notice

The **HCV-VA HDMI/DVI to VGA/Component & Audio Break-out Converter** has been tested for conformance to safety regulations and requirements, and has been certified for international use. However, like all electronic equipments, the **HCV-VA** should be used with care. Please read and follow the safety instructions to protect yourself from possible injury and to minimize the risk of damage to the unit.

- Follow all instructions and warnings marked on this unit.
- Do not attempt to service this unit yourself, except where explained in this manual.
- Provide proper ventilation and air circulation and do not use near water.
- Keep objects that might damage the device and assure that the placement of this unit is on a stable surface.
- Use only the power adapter and power cords and connection cables designed for this unit.
- Do not use liquid or aerosol cleaners to clean this unit. Always unplug the power to the device before cleaning.

Warning!

***This device is served purely for conversion between video formats.
This device CANNOT convert the input/output video resolutions.***

Table of Contents

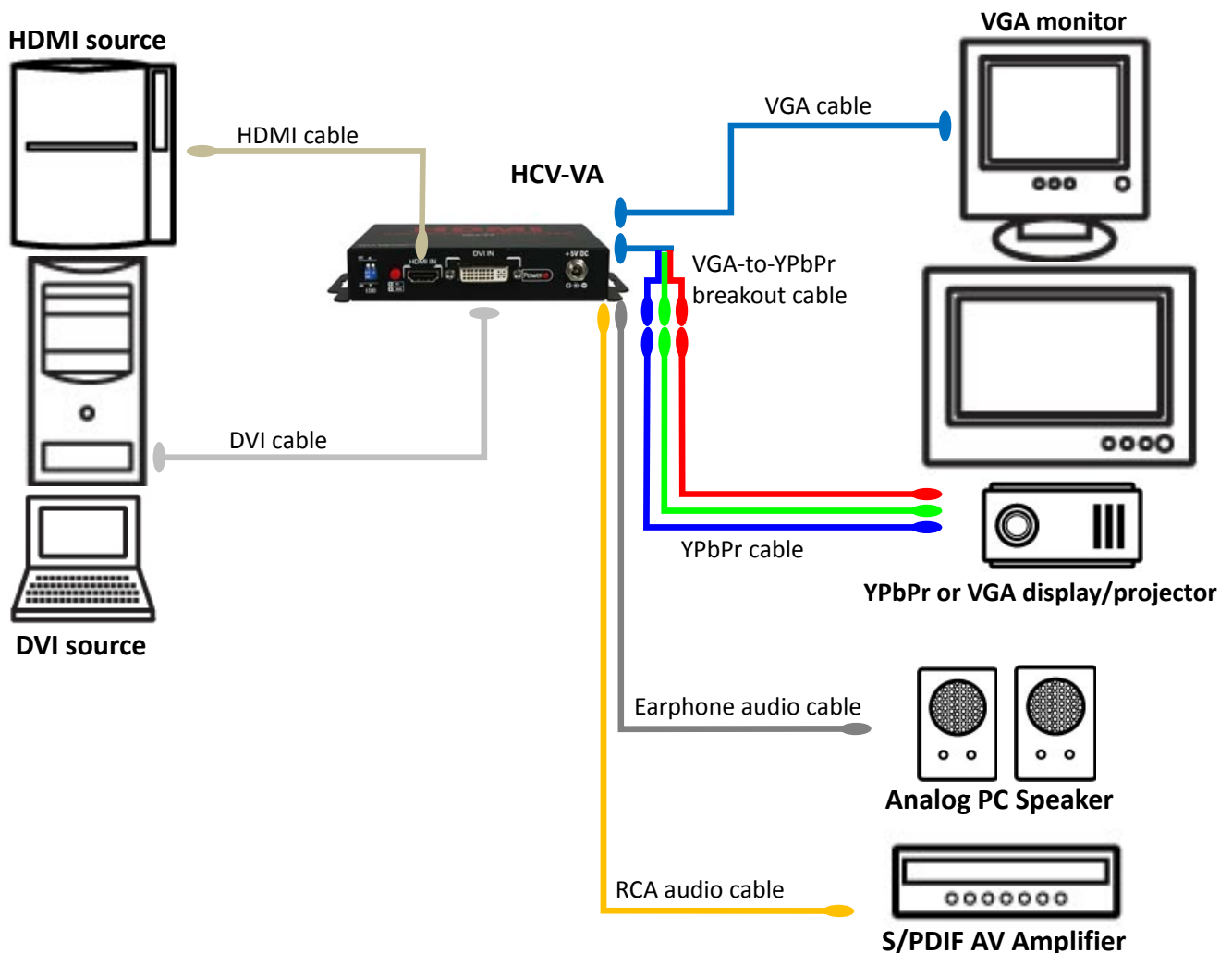
◇ INTRODUCTION	p.2
◇ PANEL DESCRIPTION	p.4
◇ HARDWARE INSTALLATION	p.5
◇ EDID LEARNING	p.5
◇ NOTICE	p.6
◇ SUPPORTED RESOLUTIONS	p.6

INTRODUCTION

This **HCV-VA HDMI/DVI to VGA/Component & Audio Break-out Converter** offers an easy and instant approach for converting digital HDMI to analog PC video (VGA) and component video (YPbPr) with digital audio (S/PDIF) and analog stereo audio. With this module, YPbPr/VGA based receivers such as LCD monitors or plasma TV can be readily connected to HDMI sources such as DVD players or PS3. In addition, the embedded HDMI / DVI selector facilitates the switch between the HDMI and DVI input sources. This cost effective solution let you keep using your non-HDMI/DVI display to access HDMI or DVI source, and enjoy high definition digital video and audio.

Features

- HDMI 1.2a & DVI 1.1 compliant
- HDMI video supports up to 1080p
- Support HD (1080i / 720p) component video output
- Support up to UXGA (1600x1200@60) & WUXGA (1920x1200@60) PC graphics output
- Coaxial S/PDIF audio output
- Stereo analog audio output
- Front panel LED indicators and push button
- EDID learning ability
- Wall mounting housing design for easy and robust installation

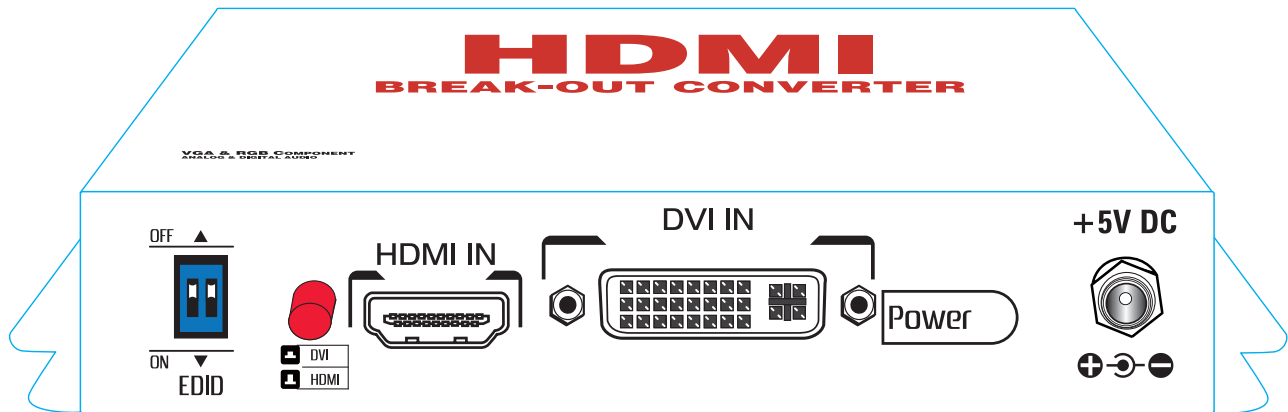


Specifications & Package Contents

Model Name		HCV-VA
Technical		
Role of usage		D/A converter
HDMI compliance		HDMI 1.2a
DVI compliance		DVI 1.0
Video bandwidth		Single-link 165MHz [4.95Gbps]
Video support		Up to 1080p60, WUXGA [1920x1200@60] & UXGA [1600x1200@60]
Audio support		Stereo audio
Input TMDS signal		1.2 Volts [peak-to-peak]
Input DDC signal		5 Volts [peak-to-peak, TTL]
Input		1x HDMI 1x DVI
Output		1x VGA/Component (through VGA-component breakout cable) 1x RCA digital audio 1x 3.5mm analog audio
HDMI connector		Type A [19-pin female]
DVI connector		DVI-I [29-pin female digital only]
VGA connector		HD-15 [15-pin D-sub female]
RCA connector		Coaxial socket for S/PDIF digital stereo audio [PCM 48kHz]
3.5mm connector		Earphone socket for analog stereo audio
Push-in button		[1] HDMI/DVI input switch [2] VGA/component output switch
DIP switch		2-pin for EDID learning
Mechanical		
Housing		Metal enclosure
Dimensions [L x W x H]	Model	128 x 100 x 28mm [5.0" x 3.9" x 1.1"]
	Package	270 x 175 x 80mm [10.6" x 6.9" x 3.1"]
Weight	Model	420g [15oz]
	Package	795g [1.8 lbs]
Fixedness		Wall-mounting case with screws
Power supply		5V 2A DC
Power consumption		6 Watts [max]
Operation temperature		0~40°C [32~104°F]
Storage temperature		-20~60°C [-4~140°F]
Relative humidity		20~90% RH [no condensation]
Package Contents		1x HCV-VA 1x VGA-component breakout cable 1x 5V power supply unit 1x User Manual

PANEL DESCRIPTION

Input View



EDID: 2-pin DIP switch for EDID setting (see more details below)

Pin 1	Function
On (↓)	Learn EDID from VGA socket and save EDID to HDMI socket
Off (↑)	Write back the default EDID to HDMI socket
Pin 2	Function
On (↓)	Learn EDID from VGA socket and save EDID to DVI socket
Off (↑)	Write back the default EDID to DVI socket

DVI / HDMI: DVI or HDMI source selector

HDMI IN: Connect to a HDMI source device with a HDMI male-male cable

DVI IN: Connect to a DVI source device with a DVI male-male cable

+5V DC: Connect to a 5V DC power supply unit

Output View



S/PDIF OUT: Connect to S/PDIF digital stereo audio speakers.

Stereo OUT: Connect to analog stereo audio speakers.

VGA / YPbPr OUT: VGA or component video output to respective display or projector. For component YPbPr output, attach the VGA-component breakout cable to the VGA socket.

VGA / YPbPr: Push button to select between VGA and component video output.

HARDWARE INSTALLATION

1. Connect HDMI or DVI source to the video input.
2. Connect S/PDIF or stereo audio source to RCA jack or 3.5mm earphone jack respectively.
3. For connecting to VGA display/projector, link VGA cable to the VGA output connector. For connecting to component (YPbPr) video display/projector, link VGA-component breakout cable first to the VGA output connector then link a component cable to the component (YPbPr) display/projector.
4. Power up the HCV-VA.

EDID LEARNING

1. Power up the HCV-VA. Connect display to **VGA/YPbPr Output**.
2. To learn EDID for HDMI source, pull down the **DIP switch pin 1 to ON (↓)** and turn off the device. Turn on the HCV-VA again then the red light will be dark and bright to indicate the EDID learning process is complete. You **DON'T NEED** to pull up the DIP switch again unless you want to learn another EDID by pulling DIP switch pin 1 up and down.
3. To learn EDID for DVI source, pull down the **DIP switch pin 2 to ON (↓)** and turn off the device. Turn on the HCV-VA again then the red light will be dark and bright to indicate the EDID learning process is complete. You **DON'T NEED** to pull up the DIP switch again unless you want to learn another EDID by pulling DIP switch pin 2 up and down.



**The EDID learning function only applies for VGA display.*

1. Only HDMI enabled TV sets with **underscan/overscan*** support, the full active video can be accurately displayed. Some HDMI equipped TV sets may not support this feature. If underscan/overscan* is NOT supported, the top, bottom, left and right border of the active video may be screened, and the S/PDIF audio may not sound right.
2. Analog stereo audio can merely support 2-channel audio. This model does NOT support 8-channel analog audio applications.
3. S/PDIF audio output supports 2-channel stereo audio only.
4. S/PDIF supports only 48KHz audio sample rate. Other than this rate, the input digital audio should be adjusted to 48KHz in order to get audio signal correctly sent.



**The underscan mode displays the full video frame, which reveals content on the edge that is recorded. In overscan, the field monitor zooms in to the area that would be visible on most televisions. Set the field monitor to underscan if your video will be viewed on a computer monitor or shown with a projector and also to look for light stands, microphones, and other unwanted objects on the edges of your shot. Set it to overscan to see how the video will look on a television.*

SUPPORTED RESOLUTIONS

PC Graphics [DVI or VGA]

VESA 640x400 @85Hz	VESA 1024x768 @60Hz	VESA 1280x960 @85Hz	1152x864@60Hz
VESA 720x400 @85Hz	VESA 1024x768 @75Hz	VESA 1280x1024 @60Hz	Mac 480-66A
VESA 640x480 @72Hz	VESA 1024x768 @85Hz	VESA 1280x1024 @85Hz	Mac 480-66B
VESA 640x480 @75Hz	VESA 1152x864 @60Hz	VESA 1360x768 @60Hz	Mac 600-66
VESA 640x480 @85Hz	VESA 1152x864 @75Hz	VESA 1440x900 @60Hz	Mac 768-60
VESA 800x600 @60Hz	VESA 1280x768 @60Hz	VESA 1400x1050 @60Hz	Mac 870-75
VESA 800x600 @72Hz	VESA 1280x768 @75Hz	VESA 1400x1050 @75Hz	IBM 6000
VESA 800x600 @75Hz	VESA 1280x768 @85Hz	VESA 1920x1200 @60Hz	NEC 1024-70
VESA 800x600 @85Hz	VESA 1280x960 @60Hz	VESA 1600x1200 @60Hz	SUN 1024-76

Video [HDMI or component (YPbPr)]

EIA 720x480p @59.94Hz
EIA 720x576p @50Hz
EIA 1280x720p @50 / 59.94 / 60Hz
EIA 1920x1080i @50 / 59.94 / 60Hz
EIA 1920x1080p @23.98 / 24 / 25 / 29.97 / 30 / 50 / 59.94 / 60Hz
712x484 (NTSC)
702x574 (PAL)